

**Dr. Duke's Phytochemical and Ethnobotanical Databases**

**List of Plants for ALPHA-MUROLENE**

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Leaf				--
Agathosma betulina	Leaf Essent. Oil				--
Ageratum conyzoides	Shoot		380.0	3.9743162254042654	R. Vera, (1993); Chemical composition of the essential oil Ageratum conyzoides L. (Asteraceae) from Reunion, Flavour Fragr. J., Vol.8, 257-260.
Angelica archangelica	Root	10.0	120.0		--
Angelica archangelica	Root Essent. Oil				--
Boswellia sacra	Resin, Exudate, Sap		66800.0		Chiavari, G., Galletti, G. C., Piccaglia, R., Mohamud, M. A. 1991. Differentiation Between Resins Boswellia carterii and Boswellia frereana (Frankincense) of Somali Origin. J. Essent. Oil Res. 3 (3):185-186.
Boswellia sacra	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Callicarpa americana	Leaf		2.0	-0.7037504760694602	--
Carthamus tinctorius	Bud		0.09		--
Citrus paradisi	Pericarp		2.0		--
Coridotherymus capitatus	Shoot		0.0	-0.3456072526178631	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Elsholtzia polystachya	Leaf		6.0	-0.48468418001670993	Mathela,C.S., Melkani,A.B., Bisht,J.C., Pant,A.K., Bestmann,H.J., Erler,J., Kobold,U., Rauscher,J. and Vostrowsky,O. 1992. Chemical Varieties of Essential Oils from Elsholtzia polystachya from Two Different Locations in India. Planta Medica 58: 376-379.
Elsholtzia polystachya	Leaf		6.0	-0.48468418001670993	Mathela,C.S., Melkani,A.B., Bisht,J.C., Pant,A.K., Bestmann,H.J., Erler,J., Kobold,U., Rauscher,J. and Vostrowsky,O. 1992. Chemical Varieties of Essential Oils from Elsholtzia polystachya from Two Different Locations in India. Planta Medica 58: 376-379.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Humulus lupulus</i>	Fruit		35.0	-0.6984779293060631	--
<i>Illicium verum</i>	Fruit		1.0	-0.7365604334696394	--
<i>Juniperus communis</i>	Fruit	54.0	542.0	-0.13060058780802927	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Juniperus communis</i>	Fruit Essent. Oil				--
<i>Laurus nobilis</i>	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Magnolia denudata</i>	Flower				--
<i>Magnolia denudata</i>	Twig				--
<i>Magnolia denudata</i>	Bulb				--
<i>Magnolia denudata</i>	Leaf				--
<i>Matricaria recutita</i>	Plant				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of <i>Glycyrrhiza-glabra</i> . Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
<i>Melaleuca alternifolia</i>	Essential Oil		2600.0		--
<i>Melaleuca alternifolia</i>	Leaf	0.001	30.0	0.829713596299792	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Melissa officinalis</i>	Shoot	3.0	24.0	-0.07276998032172868	Deutsche Apot. Zitt. 129(4):155-163. W. Schulze et al. Die Melisse.
<i>Micromeria myrtifolia</i>	Shoot		3.0	-0.3115025935808463	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of <i>Micromeria myrtifolia</i> Boiss. et Hohen. J. Ess. Oil Res., 4: 79-80.
<i>Myroxylon balsamum</i>	Plant				--
<i>Myrtus communis</i>	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Nepeta racemosa</i>	Shoot		21.0	-0.10687463935874549	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7.
<i>Nepeta racemosa</i>	Shoot		21.0	-0.10687463935874549	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum basilicum	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Origanum vulgare	Plant	3.0	15.0	1.1926315813024149	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum vulgare	Plant		6.0	-0.4094108413426202	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four Origanum vulgare Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Origanum onites	Shoot		33.0	0.029543996789321722	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Origanum vulgare	Shoot		0.0	-0.3456072526178631	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Origanum vulgare	Plant		3.5	-0.8544226254106854	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four Origanum vulgare Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Origanum vulgare	Plant		2.0	-1.1214296958515246	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four Origanum vulgare Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Panax quinquefolius	Root Essent. Oil	2007.0	9855.0	1.0	--
Pelargonium graveolens	Essential Oil				--
Pimenta dioica	Leaf		45.0	1.6512122064976056	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pimenta dioica	Leaf Essent. Oil				--
Pimenta racemosa	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Pimenta dioica	Fruit		315.0	-0.3848573067824942	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pinus sylvestris	Leaf Essent. Oil	9900.0	93000.0		--
Pinus sylvestris	Stem				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pinus sylvestris	Essential Oil				--
Pinus sylvestris	Wood				--
Piper cubeba	Fruit	1200.0	2400.0	1.9504962573662254	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Ptychopetalum olacoides	Root Essent. Oil		8000.0	-1.0	Uber Bucek, E., Fournier, G., Dadoun, H. 1987. Volatile Constituents of Ptychopetalum olacoides Root Oil. Planta Med. 53, 2: 231.
Rheum palmatum	Rhizome		19.0		--
Rosmarinus officinalis	Leaf		0.0	-0.8132836240958353	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
Rosmarinus officinalis	Plant				--
Rosmarinus officinalis	Leaf		2.0	-0.7037504760694602	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
Rosmarinus officinalis	Leaf		2.0	-0.7037504760694602	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
Salvia officinalis	Leaf Essent. Oil				--
Salvia dorisiana	Shoot	2.8	3.8	-0.3024080178376419	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of Salvia dorisiana Standley. J. Ess. Oil Res. 6: 97-8.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Satureja thymbra</i>	Shoot		0.1	-0.3444704306499626	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
<i>Satureja montana</i>	Plant	1.0	15.0	1.1926315813024149	--
<i>Sideritis pauli</i>	Shoot		13.0	-0.19782039679079028	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
<i>Sideritis mugronensis</i>	Leaf	35.0	50.0	1.9250450765635436	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
<i>Sideritis mugronensis</i>	Flower		1.0		Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
<i>Syzygium aromaticum</i>	Leaf	3.3	5.5	-0.5120674670233037	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
<i>Syzygium aromaticum</i>	Fruit				--
<i>Syzygium aromaticum</i>	Plant				--
<i>Tagetes lucida</i>	Shoot				Bicchi, C., Fresia, M., Rubiolo, P., Monti, D., Franz, C., Goehler, I. 1997. Constituents of <i>Tagetes lucida</i> Cav. ssp. <i>lucida</i> essential oil. Flavor & Fragrance, 12(1): 47-52.
<i>Tamarindus indica</i>	Fruit Essent. Oil		2000.0		--
<i>Teucrium oxylepis</i>	Shoot		0.54	-0.3394684139912	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
<i>Teucrium pseudoscorodonia</i>	Shoot		2.24	-0.3201424405368906	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Teucrium oxylepis</i>	Shoot		2.4	-0.3183235253882496	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium asiaticum</i>	Shoot		9.94	-0.23260714900854745	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium scorodonia</i>	Shoot		1.93	-0.32366658863738224	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium salviastrum</i>	Shoot		0.87	-0.3357169014971282	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Zea mays</i>	Leaf				--
<i>Zea mays</i>	Plant				--
<i>Zingiber officinale</i>	Rhizome				--
<i>Zingiber officinale</i>	Rhizome Essent. Oil				--